

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: iO LED

Report Number: P977163

Luminaire Tested: GRZ-10L-930-17x75-X-UNV-STD-4F

Issue Date: 3/21/2025

Test Information

Test Method: LM-79-2019
Report Number: P977163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-147-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 3/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: iO LED
Catalog Number: GRZ-10L-930-17x75-X-UNV-STD-4F
Description: iO COVIO LED GRAZER WITH 17X75 DEGREE OPTIC.
1000 LUMENS PER FOOT, 4 FOOT FIXTURE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

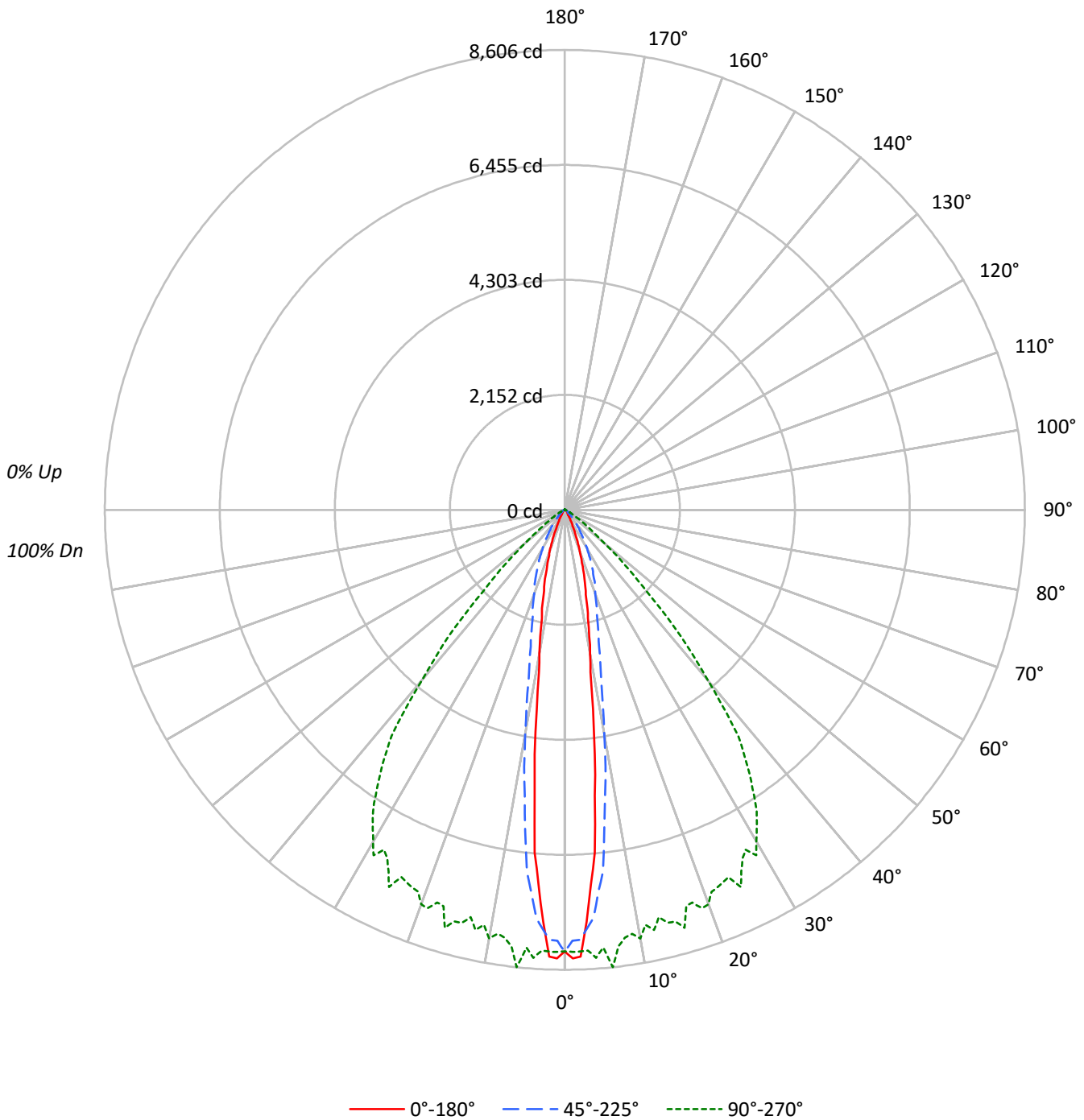
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3974.9 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 0.26 / 1.25 / 0.42
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 38
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	74
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	68
6	87	77	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64
7	82	73	67	62	81	72	66	62	71	66	62	70	65	62	69	64	61	60
8	78	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	58	56
9	75	65	59	55	74	65	59	55	64	58	55	63	58	54	62	57	54	53
10	71	62	56	52	70	61	56	52	60	55	52	60	55	52	59	55	51	50

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	133460	133460	133460
5°	104419	116438	133308
10°	44727	69655	133566
15°	24904	40597	133279
20°	14144	28639	134953
25°	7030	21877	138713
30°	3425	15347	133686
35°	2010	10257	118606
40°	1577	6667	87541
45°	1475	4117	49709
50°	1281	2735	24008
55°	1053	2010	11108
60°	988	1757	5712
65°	1039	1429	3247
70°	963	1124	2087
75°	848	848	1485
80°	632	632	948
85°	630	630	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 49709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	607.2	15.3
10°-20°	974.0	24.5
20°-30°	988.7	24.9
30°-40°	800.7	20.1
40°-50°	385.6	9.7
50°-60°	138.6	3.5
60°-70°	54.0	1.4
70°-80°	20.5	0.5
80°-90°	3.9	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.6	0.0
150°-160°	0.2	0.0
160°-170°	0.5	0.0
170°-180°	0.3	0.0
0°-30°	2569.9	64.7
0°-40°	3370.6	84.8
0°-60°	3894.8	98.0
0°-90°	3973.3	100.0
90°-120°	0.0	0.0
90°-150°	0.6	0.0
90°-180°	2.0	0.1
0°-180°	3974.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8266	8266	8266	8266	8266	
5°	6443	6579	7184	8035	8225	470
15°	1490	1660	2429	5096	7973	418
25°	395	534	1228	3038	7786	193
35°	102	153	520	1718	6017	70
45°	65	78	180	667	2177	49
55°	37	51	71	258	395	35
65°	27	31	37	92	85	26
75°	14	17	14	27	24	14
85°	3	3	3	3	3	4
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	3	0	0	0
155°	0	0	0	0	0	0
165°	3	3	3	0	0	1
175°	3	3	3	3	3	0
180°	3	3	3	3	3	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9	8265.9
1°	8395.2	8344.1	8248.9	8320.3	8388.3	8374.7	8065.2	8459.8	8367.9	8408.8	8228.5
2°	8367.9	8146.8	8085.6	7993.8	8269.3	8245.5	8051.6	8425.8	8286.3	8453.0	8303.3
3°	7718.2	7782.9	7796.5	7623.0	7973.4	7983.6	7857.7	8051.6	8211.5	8391.8	8402.0
4°	7031.1	7150.2	7163.8	7197.8	7565.2	7616.2	7653.6	7871.3	7939.3	8051.6	7908.7
5°	6442.6	6466.4	6449.4	6578.7	6939.3	7109.3	7184.2	7469.9	7742.0	8034.6	7871.3
6°	5377.9	5418.8	5520.8	5612.6	6119.5	6452.8	6806.6	7031.1	7493.7	7830.5	7861.1
7°	4605.8	4677.2	4724.8	4956.1	5207.9	5878.0	6068.5	6405.2	7136.6	7619.6	7599.2
8°	3769.0	3918.6	4020.7	4122.7	4537.7	5163.6	5391.5	5840.5	6704.6	7439.3	7514.1
9°	3078.4	3275.7	3476.4	3493.4	3884.6	4425.5	4867.7	5235.1	6265.7	7109.3	6908.7
10°	2728.1	2738.3	2908.4	3000.2	3343.8	3935.7	4248.6	4765.6	5939.2	6721.6	6898.4
11°	2408.3	2418.5	2486.6	2602.2	2911.8	3439.0	3755.4	4218.0	5367.7	6408.6	6629.7
12°	2071.6	2115.8	2241.7	2251.9	2561.4	3030.8	3258.7	3738.4	4962.9	5997.0	6286.2
13°	1887.9	1870.9	2000.1	2047.8	2255.3	2680.5	2956.0	3391.4	4513.9	5844.0	6051.4
14°	1632.8	1694.0	1806.3	1806.3	2098.8	2394.7	2636.2	3030.8	4235.0	5374.5	5741.9
15°	1489.9	1520.5	1629.4	1660.0	1857.3	2170.2	2428.7	2768.9	3850.6	5095.6	5367.7
16°	1340.2	1370.8	1435.5	1520.5	1711.0	1986.5	2228.0	2551.2	3588.7	4871.1	5146.6
17°	1173.6	1207.6	1306.2	1353.8	1540.9	1853.9	2051.2	2367.5	3371.0	4599.0	4908.5
18°	1044.3	1091.9	1166.7	1207.6	1387.9	1704.2	1952.5	2207.6	3078.4	4292.8	4622.8
19°	901.4	962.7	1027.3	1091.9	1262.0	1557.9	1802.8	2061.4	2939.0	4119.3	4527.5
20°	823.2	843.6	932.0	976.3	1159.9	1462.7	1666.8	1942.3	2768.9	3752.0	4265.6
21°	731.3	751.8	833.4	867.4	1051.1	1353.8	1581.7	1840.3	2622.6	3629.5	3973.1
22.5°	588.5	612.3	687.1	734.7	894.6	1207.6	1455.9	1680.4	2401.5	3415.2	3758.8
23°	534.1	578.3	653.1	690.5	847.0	1166.7	1394.7	1646.4	2398.1	3251.9	3632.9
24°	476.2	500.0	578.3	605.5	772.2	1085.1	1302.8	1551.1	2289.3	3180.5	3479.8
25°	394.6	425.2	496.6	534.1	687.1	1006.9	1228.0	1452.5	2115.8	3037.6	3333.6
26°	333.4	357.2	445.6	472.8	625.9	898.0	1115.7	1377.6	2037.6	2884.6	3132.9
27°	295.9	306.1	387.8	401.4	561.3	857.2	1061.3	1268.8	1938.9	2697.5	3013.8
28°	244.9	261.9	336.8	357.2	500.0	782.4	972.9	1177.0	1833.5	2554.6	2867.5
29°	217.7	231.3	285.7	312.9	445.6	710.9	898.0	1105.5	1731.4	2435.5	2779.1
30°	183.7	200.7	255.1	278.9	398.0	649.7	823.2	1030.7	1619.2	2285.9	2612.4
32.5°	136.1	146.3	183.7	207.5	299.3	520.4	663.3	850.4	1401.5	2020.6	2279.1
35°	102.0	108.9	139.5	153.1	231.3	384.4	520.4	687.1	1183.8	1717.8	1938.9
37.5°	85.0	88.4	112.3	122.5	180.3	295.9	408.2	547.7	962.7	1404.9	1602.2
40°	74.8	78.2	91.8	102.0	142.9	231.3	316.3	432.0	762.0	1132.7	1275.6
42.5°	68.0	71.4	81.6	88.4	119.1	183.7	241.5	319.8	574.9	881.0	979.7
45°	64.6	64.6	74.8	78.2	102.0	142.9	180.3	231.3	432.0	666.7	751.8
47.5°	57.8	57.8	68.0	71.4	88.4	115.7	136.1	173.5	333.4	517.0	585.1
50°	51.0	51.0	61.2	64.6	78.2	95.2	108.9	125.9	255.1	408.2	462.6
52.5°	44.2	44.2	54.4	57.8	68.0	81.6	88.4	102.0	200.7	326.6	370.8
55°	37.4	37.4	47.6	51.0	61.2	68.0	71.4	78.2	159.9	258.5	289.1
57.5°	34.0	37.4	40.8	44.2	54.4	61.2	61.2	64.6	125.9	210.9	221.1
60°	30.6	34.0	37.4	40.8	44.2	54.4	54.4	54.4	98.6	156.5	166.7
62.5°	27.2	30.6	34.0	34.0	37.4	47.6	44.2	44.2	78.2	119.1	125.9
65°	27.2	27.2	30.6	30.6	34.0	40.8	37.4	34.0	61.2	91.8	91.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
67.5°	23.8	23.8	27.2	27.2	27.2	34.0	30.6	27.2	47.6	68.0	71.4
70°	20.4	20.4	23.8	23.8	23.8	27.2	23.8	23.8	37.4	51.0	51.0
72.5°	17.0	17.0	20.4	20.4	20.4	20.4	20.4	17.0	30.6	37.4	37.4
75°	13.6	13.6	17.0	17.0	17.0	17.0	13.6	13.6	20.4	27.2	23.8
77.5°	10.2	10.2	13.6	13.6	13.6	10.2	10.2	10.2	17.0	17.0	17.0
80°	6.8	10.2	10.2	10.2	10.2	10.2	6.8	6.8	10.2	10.2	10.2
82.5°	6.8	6.8	6.8	6.8	6.8	6.8	3.4	3.4	6.8	6.8	6.8
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4	3.4	3.4
145°	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4	0.0	0.0	3.4
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4	0.0	3.4
150°	0.0	0.0	0.0	0.0	0.0	3.4	3.4	3.4	0.0	3.4	3.4
152.5°	0.0	0.0	0.0	0.0	3.4	3.4	0.0	3.4	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0	0.0	0.0
165°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0	0.0	0.0
167.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	0.0	0.0	0.0
170°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
172.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
175°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
177.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
180°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4

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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	8265.9	8265.9
1°	8214.9	8269.3
2°	8231.9	8272.7
3°	8201.3	8255.7
4°	8106.0	8402.0
5°	8180.9	8225.1
6°	7983.6	8606.1
7°	7966.5	8225.1
8°	7857.7	8085.6
9°	7745.4	8031.2
10°	7575.4	8146.8
11°	7514.1	7912.1
12°	7439.3	8034.6
13°	7201.2	7823.7
14°	7208.0	7963.1
15°	7116.1	7973.4
16°	6813.4	8133.2
17°	6881.4	7759.1
18°	6735.2	7725.0
19°	6633.1	7881.5
20°	6534.5	7854.3
21°	6303.2	7653.6
22.5°	6255.5	7599.2
23°	6286.2	7572.0
24°	6048.0	7520.9
25°	5786.1	7786.3
26°	5690.9	7527.7
27°	5565.0	7320.2
28°	5364.3	7204.6
29°	5265.7	7388.3
30°	5078.6	7170.6
32.5°	4575.2	6680.7
35°	3942.5	6017.4
37.5°	3204.3	5326.9
40°	2520.6	4153.4
42.5°	1870.9	3224.7
45°	1316.4	2177.0
47.5°	969.5	1513.7
50°	687.1	955.8
52.5°	500.0	612.3
55°	357.2	394.6
57.5°	255.1	258.5
60°	176.9	176.9
62.5°	125.9	125.9
65°	91.8	85.0

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CANDELA DISTRIBUTION (continued):

	80°	90°
67.5°	64.6	64.6
70°	47.6	44.2
72.5°	34.0	34.0
75°	23.8	23.8
77.5°	17.0	17.0
80°	10.2	10.2
82.5°	6.8	6.8
85°	3.4	3.4
87.5°	0.0	0.0
90°	0.0	0.0
92.5°	0.0	0.0
95°	0.0	0.0
97.5°	0.0	0.0
100°	0.0	0.0
102.5°	0.0	0.0
105°	0.0	0.0
107.5°	0.0	0.0
110°	0.0	0.0
112.5°	0.0	0.0
115°	0.0	0.0
117.5°	0.0	0.0
120°	0.0	0.0
122.5°	0.0	0.0
125°	0.0	0.0
127.5°	0.0	0.0
130°	0.0	0.0
132.5°	0.0	0.0
135°	0.0	0.0
137.5°	0.0	0.0
140°	0.0	0.0
142.5°	0.0	3.4
145°	0.0	0.0
147.5°	0.0	0.0
150°	0.0	0.0
152.5°	0.0	0.0
155°	0.0	0.0
157.5°	0.0	0.0
160°	0.0	0.0
162.5°	0.0	0.0
165°	0.0	0.0
167.5°	0.0	0.0
170°	0.0	0.0
172.5°	0.0	0.0
175°	3.4	3.4
177.5°	3.4	3.4



TEST NUMBER: P977163

CATALOG NUMBER: GRZ-10L-930-17x75-X-UNV-STD-4F

CANDELA DISTRIBUTION (continued):

	80°	90°
180°	3.4	3.4

(END OF REPORT)